: 4150-31)

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Secretary

Findings of Research Misconduct

AGENCY: Office of the Secretary, HHS.

ACTION: Notice.

SUMMARY: Findings of research misconduct have been made against Yihong Wan, Ph.D. (Respondent), Associate Professor, Department of Pharmacology, University of Texas Southwestern Medical Center (UTSMC). Respondent engaged in research misconduct in research supported by U.S. Public Health Service (PHS) funds, specifically National Institute of Diabetes and Digestive and Kidney (NIDDK), National Institutes of Health (NIH), grant R01 DK089113. The administrative actions, including supervision for a period of three (3) years, were implemented beginning on December 8, 2020, and are detailed below.

FOR FURTHER INFORMATION CONTACT:

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Director
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SUPPLEMENTARY INFORMATION: Notice is hereby given that the Office of Research Integrity (ORI) has taken final action in the following case:

Yihong Wan, Ph.D., University of Texas Southwestern Medical Center: Based on the report of an investigation conducted by UTSMC and additional analysis conducted by ORI in its oversight review, ORI found that Respondent, Associate Professor, Department of Pharmacology, UTSMC, engaged in research misconduct in research supported by PHS funds, specifically NIDDK, NIH, grant R01 DK089113.

ORI found that Respondent engaged in research misconduct by intentionally, knowingly, and/or recklessly falsifying and/or fabricating bone histomorphometry data by altering or creating Excel data table values for additional bone samples that did not exist or were not analyzed and by falsely stating means and standard deviations calculated from experiments with N values (i.e., number of mouse samples) that were larger than the actual N values in the following published paper:

- miR-34a blocks osteoporosis and bone metastasis by inhibiting osteoclastogenesis and Tgif2. *Nature* 2014;512(7515):431-5 (hereafter referred to as "*Nature* 2014"). Retraction in: *Nature* 2020 Jun;582(7810):134.

Specifically, ORI found that Respondent knowingly, intentionally, and/or recklessly falsified and/or fabricated bone histomorphometry data in eight (8) extended figures of one (1) published paper by manually falsifying and/or fabricating data values within multiple Excel spreadsheets and by creating increased N values without testing additional samples. Specifically:

- in Extended Figure 1i of *Nature* 2014, Respondent fabricated female vertebrae histomorphometry data by multiplying fourteen (14) different numerical values representing male mouse vertebrae data by a factor of 0.95 to create female vertebrae values in one (1) Excel spreadsheet

- in Extended Figures 1i, 2d, 3d, 3h, 4h, 6a, 6e, and 9g of *Nature* 2014, Respondent falsified histomorphometry data for ninety-nine (99) data table values from two (2) Excel spreadsheets representing bone parameters for male distal femur, male vertebrae, female distal femur, and female vertebrae samples

- in Extended Figure 4h of *Nature* 2014, respondent fabricated bone histomorphometry data by reporting that the means and standard deviations were calculated from experiments with a value of six (6) to eight (8) mice per experimental condition, when respondent calculated the means and standard deviations from only three (3) mice (N = 3)

Dr. Wan entered into a Voluntary Settlement Agreement (Agreement) and agreed to the following:

(1) Respondent agreed to have her research supervised for a period of three (3) years beginning on December 8, 2020. Respondent agreed that prior to the submission of an application for PHS support for a research project on which Respondent's participation is proposed and prior to Respondent's participation in any capacity on PHS-supported research, Respondent shall ensure that a plan for supervision of Respondent's duties is submitted to ORI for approval. The supervision plan must be designed to ensure the scientific integrity of Respondent's research contribution. Respondent agreed that she shall not participate in any PHS-supported research until such a supervision plan is submitted to and approved by ORI. Respondent agreed to maintain responsibility for compliance with the agreed upon supervision plan.

(2) The requirements for Respondent's supervision plan are as follows:

i. A committee of 2-3 senior faculty members at the institution who are familiar with Respondent's field of research, but not including Respondent's supervisor or collaborators, will provide oversight and guidance for a period of three (3) years from the effective date of the Agreement. The committee will review primary data

from Respondent's laboratory on a quarterly basis and submit a report to ORI at six (6) month intervals, setting forth the committee meeting dates and Respondent's compliance with appropriate research standards and confirming the integrity of Respondent's research.

ii. The committee will conduct an advance review of any PHS grant applications (including supplements, resubmissions, etc.), manuscripts reporting PHS-funded research submitted for publication, and abstracts. The review will include a discussion with Respondent of the primary data represented in those documents and will include a certification to ORI that the data presented in the proposed application/publication are supported by the research record.

(3) Respondent agreed that for a period of three (3) years beginning on December 8, 2020, any institution employing her shall submit, in conjunction with each application of PHS funds, or report, manuscript, or abstract involving PHS-supported research in which Respondent is involved, a certification to ORI that the data provided by Respondent are based on actual experiments or are otherwise legitimately derived and that the data, procedures, and methodology are accurately reported in the application, report, manuscript, or abstract.

(4) If no supervisory plan is provided to ORI, Respondent agreed to provide certification to ORI at the conclusion of the supervision period that she has not engaged in, applied for, or had her name included on any application, proposal, or other request for PHS funds without prior notification to ORI.

(5) Respondent agreed to exclude herself voluntarily from serving in any advisory capacity to PHS including, but not limited to, service on any PHS advisory committee, board, and/or peer review committee, or as a consultant for a period of three (3) years, beginning on December 8, 2020.

Dated: December 21, 2020.

Elisabeth A. Handley,

Director, Office of Research Integrity,

Office of the Assistant Secretary for Health.

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